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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,723	04/18/2005	Puwei Liu	LDQ-111/PCT/US	3865

31217 7590 12/05/2007  
LOCTITE CORPORATION  
1001 TROUT BROOK CROSSING  
ROCKY HILL, CT 06067

EXAMINER
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SELLERS, ROBERT E

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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12/05/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/531,723

Applicant(s)

LIU ET AL.

Examiner

Robert Sellers

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4, 6-12, 16-20, 22, 28, 34 and 39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1, 2, 4, 6-12, 16-20, 22, 28, 34 and 39 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claims 1, 4-12, 16-20 and 34, drawn to a composition comprising (a) an epoxy or episulfide resin, (b) a free radical polymerizable component and (c) a crosslinking component, and, optionally, a filler (claim 34).

Group II, claim 2, drawn to the composition of Group I further comprising a free radical initiator and/or a curative.

Group III, claim 22, drawn to a crosslinking compound of the formula  $A/C - X - FR$ , wherein A/C is an anionically or cationically reactive group or an epoxy and/or episulfide, X is a spacer, and FR is a free radical reactive group.

Group IV, claims 28, drawn to a method for adhesively attaching a chip die to another chip die or a circuit board.

Group V, claim 39, drawn to a semiconductor chip attached to and in electrical interconnection with another semiconductor chip or a carrier substrate.

The inventions listed as Groups I to V do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical feature. The special technical feature is the combination of an epoxy or episulfide resin, free radical polymerizable component and crosslinking component.

2. HWAIL et al. Patent No. 6,048,576 in column 4, Example I shows an adhesive tape for electronic parts (col. 1, line 59) comprising a mixture of epoxy resin, a bismaleimide (a species of free radical polymerizable component according to claim 6 and page 17, paragraph 51 of the instant specification) and a carboxyl group-containing acrylonitrile-butadiene copolymer (wherein the carboxyl group is reactive with the epoxy resin as required in claim 1, item (ii)a., and the diene moiety is reactive with the free radical component defined by item (ii)b. similar to the maleic anhydride-functional styrene-butadiene block copolymer shown in Example 3 on page 40).

Accordingly, the special technical feature does not make a contribution over the prior art, thereby validating a holding of lack of unity.

3. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

(a) The epoxy or episulfide resins such as the EPON 8132 epoxy resin utilized in Example 4-1 on page 41 in Table 1.

(b) The free radical polymerizable components such as the X-BMI 1,20-bismaleimido derivative of 10,11-dioctyl-eicosane of Example 4-1.

(c) The crosslinking components such as the RICON 130 maleic anhydride-grafted polybutadiene of Example 4-1.

(d) The presence or absence of the filler of claim 34, wherein if its present, a particular species is identified such as the silver flake of Example 4-1.

Contingent upon the election of Group II, items (a), (b), (c) and (d) hereinabove and (e) the free radical initiators such as the those listed on pages 30-32 in paragraphs 81-84, and/or the curatives such as the dicyandiamide of Example 4-1. Example 4-1 does not contain a free radical initiator.

Applicant is required, in reply to this action, to elect a single species ***within each of items (a), (b), (c) and (d), and (e) if appropriate***, to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Claims 1, 2, 4, 6-12, 16-20, 22, 28, 34 and 39 are generic.

The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons espoused with respect to the holding of lack of unity hereinabove.

The reply to this requirement to be complete must include (i) an election of an invention and species to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention and species.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should the traverse be on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if one of the inventions or species is found to be unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention or species.

A telephone call was made to Steven C. Bauman on November 17, 2007 to request an oral election to the above restriction and election of species requirement, but did not result in elections being made.

Upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

4. An International Search Report was completed on April 22, 2004 in related PCT application no. PCT/US03/33243. The application has been ordered to consider the references cited therein.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Sellers whose telephone number is (571) 272-1093. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

/Robert Sellers/

Robert Sellers  
Primary Examiner  
Division 1796